

MEDICAL EDUCATION ADAPTATIONS

Virtual bedside teaching rounds with patients with COVID-19

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1 | WHAT PROBLEMS WERE ADDRESSED?

The coronavirus disease 2019 (COVID-19) pandemic caused by infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) presents a significant challenge to medical education. Recent guidelines suggest that medical students should not be involved in direct patient care activities unless there is a critical health care workforce need locally.¹ These guidelines exist for several reasons, including limitations in supplies of personal protective equipment (PPE). Given the uncertainties about COVID-19, it is expected that students will continue to be excluded from evaluating COVID-19 patients in the near future. However, the COVID-19 pandemic provides profound teachable moments.

How can educators provide medical students with first-hand knowledge of caring for COVID-19 patients, as well as mitigating the risk for infection and addressing concerns about limited supplies of PPE? We demonstrate that an opportunity exists to maintain effective teaching methods and at the same time keeping students safe.

2 | WHAT WAS TRIED?

In clinical clerkships, teaching at the bedside has long been an effective method of developing competence in clinical skills. We hypothesised that students might best learn about COVID-19 from direct experiences of the care of patients who are infected with SARS-CoV-2.

We implemented an adaptation of traditional bedside rounds using a Health Insurance Portability and Accountability Act (HIPAA)-compliant videoconferencing resource namely, Zoom™ (Zoom Video Communications Inc., San Jose, CA, USA). The attending physician involved was experienced in videoconferencing, as our telehealth visits utilise the same platform. In preparation for the

teaching session, the attending physician obtained verbal consent from COVID-19 patients and coordinated with the care team. The attending physician also set expectations and communicated goals with students.

To conduct virtual bedside rounds, the attending physician affixed an iPad Pro to a computer on wheels using an elastic exercise band, and ran the videoconferencing application. The computer was connected to the meeting to share important diagnostic findings. Students connected to the videoconference (COVID Rounds) remotely and were able to see and hear the attending physician-patient encounter. Students asked patients questions and patients shared their perspectives of the COVID-19 pandemic. Institutional policy for infection prevention was followed.

3 | WHAT LESSONS WERE LEARNED?

Currently, opportunities for students to see COVID-19 patients are limited. We have implemented virtual bedside rounds using videoconferencing tools to successfully engage students in learning about the diagnosis and treatment of COVID-19.

A total of 14 students completed an anonymous post-rounds survey in which they were asked to respond to four items using a 4-point Likert scale (ranging from 'strongly disagree' to 'strongly agree'). Of the respondents, 92.9% strongly agreed that this experience had improved their knowledge of COVID-19, 92.9% strongly agreed that they had felt engaged, and 92.9% strongly agreed that they would like to continue participating in virtual COVID Rounds. All students strongly agreed that they would recommend COVID Rounds.

The overwhelming student response was favourable. One participant commented that COVID Rounds 'helped remind all of us why we chose to pursue a path in medicine'. Technical challenges, such as in audio and network bandwidth, may arise, and

faculty development in best practices for bedside videoconferencing continues. These rounds engage students in valuable experiences from which these future physicians would otherwise be excluded, and include the demonstration of typical findings of this novel disease and communication skills such as those used in the breaking of bad news. Depending on session goals, we envision the development of a new 'surgical amphitheatre' and opportunities to reach students at various levels of training. Our findings suggest support for the conducting of virtual COVID Rounds.

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